



# UNITED STATES PATENT AND TRADEMARK OFFICE

*CW*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

|   |             |                      |                          |                  |
|---|-------------|----------------------|--------------------------|------------------|
| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO. |
| 10/802,772  | 03/18/2004  | Kyeong Jin Kim       | 054358-5025              | 4675             |
| 9629 7590 03/09/2007<br>MORGAN LEWIS & BOCKIUS LLP<br>1111 PENNSYLVANIA AVENUE NW<br>WASHINGTON, DC 20004 |             |                      | EXAMINER<br>DUONG, TAI V |                  |
|   |             |                      | ART UNIT                 | PAPER NUMBER     |
|   |             |                      | 2871                     |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE  |             | MAIL DATE            | DELIVERY MODE            |                  |
| 3 MONTHS  |             | 03/09/2007           | PAPER                    |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/802,772

Applicant(s)

KIM ET AL.

Examiner

Tai Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-26 and 29-44 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 27 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/16/2007 has been entered.

The objection to the drawings and the rejection under 35 U.S.C. 112 are withdrawn in view of the amendments to the claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 23 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2003-035893 (JP'893).

Note Figs. 3 and 5-7 which identically disclose the claimed dual LCD device comprising first and second polarizing plates attached to opposing surfaces of the liquid crystal panel 4 (paragraph 0027), a first front light unit 5a attached to a front side of the liquid crystal panel, and a second front light unit 5b attached to a rear side of the liquid crystal panel, wherein the first and second front light units are disposed opposite sides of the LC panel and the first and second front light units overlap each other with the LC panel disposed between, wherein the first front light unit is operated to cause a first image to be displayed on the rear side of the liquid crystal panel, and the second front

light unit is operated to cause a second image to be displayed on the front side of the liquid crystal panel.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 7-16, 24, 25 and 29-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2003-035893 (JP'893) in view of Smith et al and Kaneko (US 2002/0176036).

The only differences between the dual LCD device of JP'893 and that of the instant claims are the LC panel being formed in a mode selected from the group consisting of TN mode, IPS mode, and VA mode, optical axes of the polarizers being perpendicular, a fine reflecting and scattering film is prepared between the first or second polarizing plate and the first or second front light unit and prevents Moiré phenomenon from occurring when an image is displayed on the rear or front side of the liquid crystal panel due to a light emitted from the first or second front light unit. Smith discloses that it was common to employ mode selected from the group consisting of TN mode, IPS mode, and VA mode, and optical axes of the polarizers being perpendicular (col. 3, lines 12-26). Kaneko discloses in Fig. 3 that it was known to employ a reflecting and scattering film (reflection polarizer 10 and scattering layer 19) between a polarizing plate 12 and a light unit (7, 8, 14) for obtaining a brighter display while preventing Moiré

(paragraphs 0097-0099). Thus, it would have been obvious to a person of ordinary skill in the art in view of Smith to employ the LC panel being formed in a mode selected from the group consisting of TN mode, IPS mode, and VA mode, and optical axes of the polarizers being perpendicular in the dual LCD device of JP'893 because these modes and the perpendicular configuration of the polarizers are common in the art. Also, it would have been obvious to a person of ordinary skill in the art in view of Kaneko to employ in the dual LCD device of JP'893 a reflecting and scattering film between the polarizing plate and the light unit for obtaining a brighter display while preventing Moiré.

Claims 17-22 and 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2003-035893 (JP'893) in view of Smith et al and Kaneko (US 2002/0176036).

The only differences between the dual LCD device of JP'893 and that of the instant claims are a scattering film is prepared between the first or second polarizing plate and the first or second front light unit and prevents Moiré phenomenon from occurring when an image is displayed on the rear or front side of the liquid crystal panel due to a light emitted from the first or second front light unit. Kaneko discloses in Fig. 1 that it was known to employ a scattering film 9 between a polarizing plate 12 and a light unit (7, 8, 14) for scattering incident light while preventing Moiré (Abstract, paragraph 0099). Thus, it would have been obvious to a person of ordinary skill in the art in view of Kaneko to employ in the dual LCD device of Jp'893 a scattering film between the polarizing plate and the light unit for scattering incident light while preventing Moiré.


Claims 5, 6, 27 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5 and 27 are allowed over the prior art of record because none of the prior art discloses or suggests a dual LCD device having a structure as recited in claim 1 or 23 in combination with the feature "wherein the liquid crystal panel functions in a TN mode, such that the first front light unit is in an ON state and an image displayed on the rear side of the liquid crystal panel is in a black mode, and such that the first front light unit is in an OFF state and an image displayed on the rear side of the liquid crystal panel is in a white mode".

Claims 6 and 28 are allowed over the prior art of record because none of the prior art discloses or suggests a dual LCD device having a structure as recited in claim 1 or 23 in combination with the feature "wherein the liquid crystal panel functions in a TN mode, such that the second front light unit is in an ON state and an image displayed on the front side of the liquid crystal panel is in a black mode, and the second front light unit is in an OFF state and an image displayed on the front side of the liquid crystal panel is in a white mode".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai Duong whose telephone number is (571) 272-2291.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

  
TOAN TON  
PRIMARY PATENT EXAMINER

TVD  
03/07